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THE ORANGE-CROWNED WARBLER AS A FALL AND WINTER VISITANT IN THE REGION OF BOSTON, MASSACHUSETTS.¹

BY HORACE W. WRIGHT.

MY records of the Orange-crowned Warbler (*Vermivora celata celata*) in the Boston Region during a period of eight years ending with January, 1916, supplemented by the records of other observers, indicate that in recent years one or more individuals of the species are not unlikely to be found here by an observer who is much afield in the late autumn or early winter. To be sure, it is pretty much a matter of good fortune to find the individual bird or birds, since several fellow members of the Nuttall Ornithological Club inform me that they have not in a life's experience seen one in the wild. My own experience is, therefore, a fortunate one.

Mr. William Brewster in his 'Birds of the Cambridge Region,' published in 1906, gives nine records within the years 1885-1905, seven records of birds in his own garden and two others in Belmont. He has now kindly furnished me with two subsequent records for his garden, one in 1910 on November 20-21 and one in 1914 on September 23. Mr. Brewster's interesting experience and testimony first established the fact that the Orange-crown is more than an accidental visitant in the autumn in this region. My own records corroborate this idea and suggest, together with his, that while the species must still be regarded as a rare migrant, yet it may be looked for with a fair degree of expectation of finding it.

Mr. Brewster's eleven records lie within the period of the autumn from September 23 to November 28. There are three for September, namely, the 23d, and the 30th twice; none for October; and eight for November, namely, 7th, 9th, 10th, 17th, 20th-21st, 23d-24th, 25th, and 28th. On two occasions two birds were present, November 9 and 28. My own records run later. The earliest is November 5, and the latest is January 23. They are November 5, 18, 20, 22, 28, 29, December 3, 7, 9, 20, January 10,

¹ Read before the Nuttall Ornithological Club, April 17, 1916.

19, 23. Thus the species may be regarded not only as a late fall migrant, but even as a winter visitant. The records of other observers, as hereafter given, also indicate this.

In connection with my own records, it has been interesting to look up published records of the Orange-crowned Warbler for the whole section of New England and the Middle Atlantic States. The result of the investigation follows.

In Knight's 'Birds of Maine,' published in 1908, I find it only in the hypothetical list, with the inference that there is no well authenticated instance of its occurrence in the State. Mr. Knight regards the set of eggs in the Smithsonian Institution which were collected near Brunswick, Maine, and referred to this species, but the data of which seem to be lacking, as more likely to be that of the Nashville Warbler, and states that Audubon's record of the species breeding in Eastern Maine seems very likely a mistake, and that subsequent writers have so regarded his statement.

In Allen's 'Birds of New Hampshire,' published in 1903, one spring record is given, that of a single bird taken May 16, 1876, by Dr. W. H. Fox at Hollis. There is no autumn record.

Miss Alice W. Wilcox, director of the Fairbanks Museum of Natural Science at St. Johnsbury, Vermont, writes me, "We are quite outside the range of the Orange-crowned Warbler. No record that I know of has been made of it in Vermont. Our museum specimen is from Texas."

In Howe and Allen's 'Birds of Massachusetts,' published in 1901, four records are given: one shot at Springfield, May 15, 1863, by Dr. J. A. Allen, "who saw several other birds at the same time which he believed to be of this species"; one taken at Lynn, January 1, 1875 (by Dr. Brewer); a female taken by Mr. William Brewster on October 2, 1876, at Concord; and an adult male captured in the autumn of 1885 (September 30) in Belmont by Mr. H. W. Henshaw. The last record is included by Mr. Brewster in his list of occurrences in the Cambridge Region.

Rhode Island furnishes three published records. In Howe and Sturtevant's 'Birds of Rhode Island,' published in 1899, with supplement thereto in 1903, it is stated that one was shot by Mr. F. T. Jencks at Cranston, December 3, 1874, and a male bird was taken in East Providence on May 9, 1891. Of the former

occurrence Mr. H. A. Purdie, in a "Notice of a Few Birds of Rare or Accidental Occurrence in New England" (Bull. N. O. C. II., 1877, p. 21), says that it is the fifth specimen reported for New England and the second taken in the winter season. The bird taken by Dr. Brewer in Lynn, Mass., January 1, 1875, is, doubtless, the other winter occurrence referred to. The third record for the State has been furnished by Mr. Henry S. Hathaway (Auk, Vol. XXX, Oct., 1913, p. 556), namely, "A male of this very rare migrant was shot by the late James W. Stainton in Cranston on May 17, 1892. It is now in the collection of Rhode Island birds in the Park Museum of Providence."

In 'Birds of Connecticut' by Messrs. Sage, Bishop and Bliss, published in 1913, five records are given: a male shot in company with Nashville Warblers at East Hartford, May 8, 1888, by W. E. Treat; a female secured by L. H. Porter at Stamford, November 11, 1893; a male taken by L. B. Bishop on October 1, 1906, at New Haven; a young male taken by E. S. Woodruff at New Haven, October 8, 1906; and one seen by Dr. Bishop, October 6, 1911, at New Haven.

These New England records, dating from 1863, exclusive of Mr. Brewster's and my own, aggregate five in the spring in the years 1863, 1876, 1888, 1891, 1892 respectively; six in the fall in the years 1876, 1885, 1893, 1906 (two), 1911; and two in the winter, December 3, 1874, and January 1, 1875. Mr. Brewster adds ten records, all in the fall, one of his published nine records, that of the bird secured by Mr. Henshaw at Belmont in 1885 already having been enumerated. My records number thirteen. of which six were in the fall, all in November, and seven in the winter. The fall records are definitely those of six different individuals. The seven winter records not improbably include but five different individuals. Neither Mr. Brewster nor I have any spring record.

My thirteen records are of a single bird in each instance, namely: 1905, January 19 and 23, Abington, Plymouth Co.; 1908, November 5, Middlesex Fells, Stoneham; 1908, November 29, Cambridge, near Fresh Pond; 1910, December 3, Olmsted Park, Brookline, beside Leverett Pond; 1913, November 22, Belmont; 1914, November 18, Belmont; 1915, November 20, Olmsted Park,

Boston, beside Jamaica Pond; November 28, Fresh Pond reservation, Cambridge; December 7 and 9, Olmsted Park, Boston; December 20, Olmsted Park; 1916, January 10, Fresh Pond reservation, Cambridge, seen by Mrs. B. W. Parker and Miss Alice M. Paul on the 26th.

The 1905 bird was found in Island Grove Park in a grove of tall pines on a day when the ground was bare, feeding with a numerous band of Chickadees on the surface. Many views of it were obtained between its successive short flights from place to place, and a full description of its plumage was written down in my note book. I was puzzled at the time what name to put upon this warbler, for I had not as yet an acquaintance with the Orange-crown. Again, four days later, I visited the grove and readily found the warbler with the Chickadees, as before most of the time feeding on the ground, but sometimes in oak or pine saplings, and only when disturbed flying up into a taller tree, from which perch it would soon drop to the ground once more. Again a full description of the bird was written out in my note book. But it was not until I had had my subsequent experiences with the Orange-crowned Warbler that I could name this Abington bird with a sense of certainty as to its identification. Five days later I again visited the grove with Mr. Maurice C. Blake as a companion. Meanwhile a blizzard at a temperature of 11°, depositing a foot or more of snow, which lay upon the ground, had occurred. We could not find the warbler with the most careful and persistent searching. Its companions were present, the Chickadees, Red-breasted Nuthatches, and Brown Creepers, thirty of the first named, three of the nuthatches, and eight or ten of the creepers. Three Myrtle Warblers also were seen. We hoped the Orange-crown got safely away, but the chances seemed to point to its death by the storm. A temperature as low as 5° had already occurred on January 6, but there had been only light snows of not much depth up to the 25th. Abington is nineteen miles southward from the State House on Beacon Hill.

The first 1908 bird, seen on Bear Hill in the Middlesex Fells reservation, was also much upon the ground and at other times in low growth of bushes, the common barberry and privet. Its companions were Chickadees, Fox Sparrows, Juncos, and a Yellow

Palm Warbler. A spring of pure water was near at hand from which flowed a little stream. The second 1908 bird was seen in the rose garden of the late John C. Gray, Esq., whose estate is situated near Mount Auburn Cemetery, Cambridge. This bird frequently gave a sharp "chip" call.

The 1910 bird, a second winter bird, was seen on December 3, a clear, moderately cold day, with a temperature range from 24° to 32°. About noon I came upon the Orange-crown actively moving through shrubbery near Leverett Pond, sometimes resting on the topmost branches and thus affording very complete views of itself. This bird had as a companion the still more rare Blue-gray Gnatcatcher (Auk, Vol. XXVIII, Jan., 1911, p. 117). It was silent. The general coloring was brighter than that of the birds previously seen, which were much more dusky. It was regarded, therefore, as probably an adult male bird. Both birds were seen on the following day by Mr. Richard M. Marble, having moved only a short distance southward in the park, but having passed across the boundary line from Brookline to the Boston side.

The 1913 bird came to view in a small glen in that undeveloped part of Belmont Highland which lies next to Arlington Heights. I had been in search of Acadian Chickadees, nine of which I had successively seen (Auk, Vol. XXXI, April, 1914, p. 236). A Winter Wren had just presented itself after announcing its presence by its nervously rapid calls. The Orange-crown appeared close by in company with Golden-crowned Kinglets. A little run of water flows through the glen. The warbler was seen on barberry bushes growing among scattered cedars.

The 1914 bird was also seen in Belmont in a pasture with a scanty bush growth, occupying a rather limited group of bushes. An old apple orchard and some swampy land with birches were near, which were, doubtless, an additional attraction. My own experience, however, is that the Orange-crowned Warbler much more frequents shrubbery than trees.

The first bird of 1915 was seen close to the shore of Jamaica Pond on November 20, in the planting of shrubs which borders the footpath, appearing as I proceeded along the walk. The second bird of the season was seen at Fresh Pond on November 28. I had gone up to the reservation with my sister in the afternoon of a rare

late autumn day in which the temperature had risen to 57°, with the air calm. One of the first birds observed was an Orange-crown in the thick shrubbery, as we ascended a flight of steps from the shore of the Cambridge cove of the pond to the park land above, occupied in part by large hemlocks and white pines, with fringes of shrubs. Its companions were Chickadees. On one of the hemlocks was a White-winged Crossbill in the plumage of the female, the only one seen in the fall and winter of 1915. Before leaving the grove we had seen the warbler several times by returning to its chosen haunt. Just before sunset another interesting bird appeared in the form of a Great Blue Heron in the sky, flying over the pond southward. I searched for the warbler the following morning, but could not find it.

On December 7, I once more found an Orange-crown near Jamaica Pond in a somewhat extensive growth of young hemlocks near the memorial to Francis Parkman. It was in association with a late migrating Ruby-crowned Kinglet, two Golden-crowned Kinglets, and Chickadees. Mr. C. E. Clark of Medford had joined me, and we viewed the warbler together. It frequented the ground under the hemlocks much more than the branches of the trees. When undisturbed, it was generally feeding on the ground, and it sought the branches only when our approach became too close. Mr. H. L. Barrett recorded this bird on December 5, and Mrs. Lidian E. Bridge on December 8. The location of this Orange-crown was nearly identical with that of the bird of November 20, except that the hemlock growth stands somewhat farther back from the shore of the pond across the park drive. But that it was the same individual may be questioned, since I had looked for the warbler of November 20 on four successive walks through the park in the intervening time, namely, on November 23, 27, 29, and December 2, and had not been able to find it. On December 9, however, I again saw this later Orange-crown in the same location. On December 20 once more one was seen in the hemlocks. I had supposed that the last record for the season had already been obtained, for I had been through the park on December 13, 15, and 18, and Mr. F. H. Allen, as well as others, had looked carefully for the bird of December 5 to 9 on the 11th and 12th, and no one of us had been able to find it. It may not be unreasonable to infer,

therefore, that three individuals successively visited this locality in the season of 1915, as Mr. Brewster's garden records of 1891, namely, one on November 10, one on November 25, and two on November 28, seem to indicate a succession of migrants; also his records of 1900, namely, two on November 9 and one on November 23-24. If our supposition be correct, this bird of December 20 was the fourth for the season.

On January 10, 1916, again I found an Orange-crowned Warbler in close proximity to the Fresh Pond reservation. A damp snow was falling fast at the time the bird was seen, but later in the day the precipitation became rain. Directly upon leaving the electric car at the parkway, the warbler appeared in a low hedge of *Berberis thunbergii*, bordering the front yards of the houses standing in a row on the drive. It was presently clearly identified. The bird moved along in advance of me down through almost the entire length of the hedge row, 400 or more feet, passing on by short flights, while I successively advanced from stops made for repeated observations. The sharp "chip" call was given. It proved to be the only bird abroad on this occasion, for I passed on to the park, and in a half-hour's time no other bird gave evidence of its presence by flight or call. This warbler is scarcely likely to have been the warbler of November 28, since I had made visits to the reservation on December 1, 4, 10, 16, 23, 25, and January 5, and had seen no Orange-crowned Warbler. It may be regarded, therefore, as the fifth individual for the season. On January 26 this bird, presumably the same, was seen by Mrs. B. W. Parker and Miss Alice M. Paul on the west side of the reservation upon a bank covered with young white pines and shrubs. The warbler was observed on the ground, as is not uncommonly the case. Golden-crowned Kinglets had already been viewed by the ladies, when the warbler appeared. Their testimony seems conclusive that the Orange-crown seen by me on the 10th was still present in the reservation on the 26th. I am informed also that two other observers had seen this warbler a day or two previous to that date. Only one period of snow-covered ground had occurred up to that time. The last days of December and early days of January had furnished about six inches of snowfall, which gradually had been disappearing until before the end of the month the ground was entirely bare of

ice and snow, and conditions were still favorable for gleaning food even upon the surface.

There had been two minima temperatures of 8° and one of 4° in the month of January preceding the 26th, when the Orange-crown was last seen. In this connection the testimony of Mr. Arthur T. Wayne of South Carolina is interesting. Mr. Wayne in 'a general note' of 'The Auk,' (Vol. XXII, October, 1905, p. 417), states "The Orange-crowned Warbler is capable of enduring intense cold. I have seen numbers of these highly interesting birds near Charleston when the thermometer ranged as low as 8° above zero." Mr. Wayne further states "The Orange-crowned Warbler *winters abundantly* [the italics are his] on the coast of South Carolina, and it arrives from the northwest the last week in October and remains until the first week in April, or perhaps even later." In a letter recently received from Mr. Wayne he confirms these statements, saying that it winters regularly in the region of Charleston, but that more are seen in some winters than in others, that the species arrives there about October 30, the earliest record, and remains until the second week in April.

Other records than those already given which have been furnished me are:

One seen by Miss Blanche Kendall feeding on the suet in her yard in Brookline on January 4, 1901. Miss Kendall writes me, "The bird was here frequently through January and February," and states that there was difficulty at the time about its identification, but later it was determined with certainty to be an Orange-crown. Mr. Frederic H. Kennard saw the bird on February 11 and gives confirmation as to its identity.

One seen by Dr. C. W. Townsend and Dr. Glover M. Allen at the border of the Virginia Wood in the Middlesex Fells, Melrose, on November 29, 1906. This bird had been seen by Mrs. L. E. Bridge on the 26th.

One seen by Mrs. Bridge in West Medford on October 3, 1909.

One seen by Mr. Barron Brainerd and his father, Dr. Brainerd, in Olmsted Park, Brookline, on November 25, 1909, when the "sky was overcast and drizzling," following "a day with a north-east gale accompanied by sleet." The bird's call was noted as "stweep."

One seen by Mrs. Elizabeth M. Dunham in Auburndale, December 20, 1909, which, Mrs. Dunham states, "came into an apple tree close by a window where I was feeding some Chickadees, and remained some minutes."

One seen by Mr. H. L. Barrett in the Arborway, Jamaica Plain, not far from Jamaica Pond, Boston, November 19, 1911.

One seen by Mr. Barrett in Jamaica Plain on December 16, 1912.

One seen by Mr. Barrett beside Scarboro Pond in Franklin Park, Boston, with Mr. Ralph M. Harrington on November 15, 1914.

One seen by Miss E. D. Boardman at West Manchester on the North Shore, October 29, 1915, "near my bird bath."

These records make a contribution of nine more to the number for this vicinity, two in October, four in November, and three additional winter records, namely, December 16, 20, and January-February. Combining the records now presented in the several groups given, we find that, beginning with the year 1908, in the last eight years no year is without a record: 1908 and 1910 each have two records; 1911, 1912, 1913, each have one; 1909 and 1914 each have three; 1915 has six. In the years previous to 1908 there are two records in 1905, one each in 1904 and in 1901, three in 1900, three in 1891, and one in 1885, all these being the records of Mr. Brewster, except the 1901 Brookline bird and the 1905 Abington bird. So the appearance of the Orange-crowned Warbler in this vicinity, based upon records, may be said to have been more regular in the last eight years than in the twenty-three years preceding, although the increase of intelligent observers afield in the more recent years may in part account for the difference.

The oft-repeated presence of the Orange-crowned Warbler in the region of Boston in November, eighteen occurrences have been presented, together with its several recent recorded appearances in December and January, ten in number, whereas there are fewer September and October records, indicates that they are mostly the very late migrating birds which reach this section. As the species is a summer resident of the far northwest, Manitoba to Alaska, and its fall migration to the Atlantic Coast is southeasterly, passing, however, mostly west of the Alleghanies to the South Atlantic and Gulf States, the individuals which reach New Eng-

land have evidently proceeded on a more northerly route, in the course of which some at least seem to occupy more time in their migratory passage to the coast line.

And it would appear that the coast line is their ultimate goal, since I can learn of no late fall or winter records of the species in the interior of New England nor for the State of New York. Mr. Eaton in his 'Birds of New York' states "In the fall, migration takes place between the 25th of September and the 12th of October." And Mr. James H. Fleming in an article on the Birds of Toronto, Canada, testifies that it is a "regular migrant, rare, May 7 to 15 and probably later (May 27, 1888, Hamilton, Ontario); in the fall, October 6 to 10." And he further states "I have the records of only eight in eight years," (Auk, Vol. XXIV, Jan., 1907, p. 71).

It would appear, therefore, from such testimony as we have that the species leaves the interior before the middle of October and that the individuals which reach the seacoast at Boston and vicinity in November and later show a disposition to linger and even to winter here. This is the case of the Myrtle Warbler (*Dendroica coronata*) in its southward migration, the records of which show that as a wintering bird the species confines itself quite closely to the coast line after the period of its general migration. So hereabouts we do not obtain winter records of the Myrtle Warbler in territory lying much back from the immediate coast line, while the species is a regular winter resident in considerable numbers in towns along the shores of Massachusetts, showing hardiness in the very low temperatures which occasionally occur here, when the mercury falls to zero or below zero.

In this connection Mr. Wayne of South Carolina may again be quoted. In 'The Auk' for January, 1886, p. 138, Mr. Wayne states that he secured his first specimen of Orange-crowned Warbler on November 29, 1884, that the bird was shot on Sullivan's Island, which is "about six miles long and seven miles from Charleston, directly on the Atlantic Ocean." . . . "This warbler," he writes, "is a late autumnal migrant, . . . wintering in small numbers, especially on Sullivan's Island, as nearly all my specimens were taken on that island. They were all shot from myrtle bushes and invariably fell, when shot, into the water. I, therefore, consider this species strictly maritime when in South Carolina. . . . I have

failed to find the species five miles from Charleston away from the coast, but have taken it nine miles from Charleston on the coast. I have taken specimens in November, December, January, February, and March. The bird appears to migrate early in the Spring. . . . I have taken males in January with the crown bright orange. . . . I secured in all about fifteen specimens during the winter of 1884." Mr. Wayne found his birds "always keeping in the thickest bushes, searching for worms and larvæ amongst the dead leaves." Mr. Wayne again refers to the species as maritime in 'The Auk,' Vol. XXII, Oct., 1905, p. 417, where he states "The centre of abundance of these warblers [*V. celata*] is on the coast islands, as the greater part of these islands are veritable jungles, which the Orange-crowned Warbler delights to inhabit."

In view of Mr. Wayne's testimony for South Carolina and of the Boston Region records it is quite surprising, therefore, to find in 'The Auk' for January, 1916, Vol. XXXIII, p. 78, a 'general note' by Mr. J. T. Nichols and Mr. Ludlow Griscom of New York, which states "On January 3, 1915, we discovered an Orange-crowned Warbler in some live oaks on Monkey Island, Carritucket Sound [North Carolina]. The bird was collected and proved to be a female. It is now in the collection of the American Museum of Natural History, catalogue no. 123791. Mr. T. Gilbert Pearson informs us that this is the third record for the State." And Mr. C. J. Maynard in his 'Warblers of New England,' published in 1905, also states "The farthest north that I have found it [*V. celata*] in autumn was at New River, North Carolina, where a female, now in my collection, was obtained on November 11, 1900." Mr. Maynard in a letter just received confirms this statement, that this North Carolina specimen in his collection continues to be the most northern individual that he has seen along the Atlantic Coast.

To these very few records for North Carolina may be added two obtained just farther north in Virginia in the autumn: one, that of a fine adult bird taken by Dr. A. K. Fisher on October 13, 1889, while collecting in company with Mr. H. W. Henshaw, at Munson Hill, a locality a few miles from Washington, D. C. Dr. Fisher states "when first seen, it was in a thicket of small alders, blackberries, and thoroughworts, gleaning insects from

among the flowers of the latter plant" (Auk, Vol. VII, January, 1890, p. 96). And Mr. Ellison A. Smyth, Jr., in an article on 'Birds Observed in Montgomery County, Virginia,' furnishes a second record, that of a specimen obtained by him on October 2, at Blacksburg, a "town west of the Blue Ridge Mountains and near the summit of the Alleghany" (Auk, Vol. XXIX, Oct., 1912, p. 523). I find no other records published in the issues of 'The Auk' for these States.

But Dr. Witmer Stone in his 'Birds of Eastern Pennsylvania and New Jersey,' published in 1894, gives five records for that region, namely, one in February, 1860, on Rancocas Creek, N. J. (Turnbull); two in March: one about 1876 at West Philadelphia (McIlvaine) and one on March 22, 1883, at Haddonfield, N. J. (S. N. Rhoads); one on October 6, 1889, at Anglesea, N. J. (P. Laurent); and one on November 2, 1867, in Bucks Co., Pa. (C. D. Wood). These records are supplemented in Dr. Stone's 'Birds of New Jersey' in the Report of the New Jersey State Museum for 1908, p. 271, by two more records, namely, one at Hoboken, May, 1865, by C. S. Galbraith and one at Haddonfield on February 25, 1909, by R. T. Moore (Auk, Vol. XXVIII, Jan., 1910, p. 85). It is further recorded in the Report "John Krider states that he got one in New Jersey in December, when the ground was covered with snow." Here are furnished three distinct winter records for New Jersey and Eastern Pennsylvania, two in February and one in December, while the two March records suggest birds wintering rather than in their spring migration. Dr. Stone terms the Orange-crowned Warbler in New Jersey a "very rare transient visitant, February, March, and October, possibly winter resident in the southernmost counties."

To these records Mr. Richard C. Harlow adds a spring record, namely, "During the spring of 1909 it was my good fortune to be able to establish the occurrence of this bird [Orange-crowned Warbler] at State College, Center County, Pennsylvania. During a late flight of warblers on May 16 I observed several which I took to be Tennessee Warblers, but on collecting a pair of them they were found to be of this species. There were probably six or seven in the flock, and another taken was too mutilated for preservation. When seen the birds were in willows along a small stream in com-

pany with Nashvilles, Northern Parulas, and a few Redstarts. This date is remarkable because of the fact that the few Pennsylvania and New Jersey specimens have almost invariably been taken in late February or early March" (Auk, Vol. XXVIII, April, 1911, p. 268). This flock must have been a part of the general migration of Orange-crowns which takes place at the time named, but passes mostly west of the Alleghanies. The records gathered by Dr. Stone would seem to be those of the few birds which have kept more closely to the coast line.

Proceeding farther north in our survey to New York, where Mr. Eaton in his 'Birds of New York' states "In the fall, migration takes place between the 25th of September and the 12th of October," we find these October records: a female was taken, October 9, 1876, and a second specimen seen on the 29th of the same month by E. P. Bicknell at Riverdale (Bull. N. O. C., vol. IV, 1879, p. 61); a young female was shot near Syracuse, October 2, 1886, by Morris M. Green (Auk, vol. IV, Oct. 1887, p. 350). And Mr. William Dutcher, giving 'Notes on Some Rare Birds in the Collection of the Long Island Historical Society' states concerning *V. celata*, "This specimen was shot on the Eastside lands by Mr. [John] Akhurst [taxidermist, Brooklyn], and is the only one he ever procured. It is in immature plumage and was shown to, and identified by, Mr. George N. Lawrence" (Auk, Vol. X, July, 1893, p. 277). We find also in the same volume an account of a young male bird shot at Flatbush, Kings Co., on October 12, 1892, by Mr. Arthur H. Howell, who states that the Orange-crowned Warbler has never before been recorded from Long Island. Mr. Howell also states that "Dr. Edgar A. Mearns refers to it as a 'rare migrant' in the Hudson River valley" [p. 90].

So the very scattered records for the middle Atlantic Coast States are fewer than those of South Carolina to the South, where the species regularly winters, which would be expected, but are also fewer than those of the Boston Region on the north, which would not naturally be expected.

We have no records as yet, however, of the Orange-crowned Warbler remaining throughout the winter in the Boston Region except that of Miss Kendall in Brookline, where the warbler frequently visited the suet in her yard through January and

February, thus being assisted in procuring its needful supply of food. The species has not yet proven a capacity to cope with the severest conditions of weather which visit this region. The January 19 and 23 bird at Abington in 1905 and the January 10 and 26 bird at Fresh Pond, Cambridge, in 1916 seemed to be showing such a capacity, as they had already endured milder winter conditions, but they passed from our ken when the weather conditions became severer, as was the case after the last obtained record of each of these birds. I believe the consensus of opinion is that a migrating bird having remained in the north into the month of January is not likely to have the instinct of migration carry it to its more usual winter range, but will seek a living where it is, or, may be, wander simply in its search for food. So this 1916 bird may still be somewhere in the vicinity, if mishap have not overtaken it, which with regret we must say is quite too likely. The vicinity of Boston, however, appears to mark the northern limit of the appearance of the species in the east in the fall and winter, as the absence of Maine, New Hampshire, and Vermont records indicates.

Two instances of quite accidental occurrence of other warblers in this region in the winter may be cited as of interest in this connection. Dr. Walter Faxon gives me that of a Nashville Warbler (*Vermivora rubricapilla*) found by him dead in Swampscott, January 31, 1890. This bird was found "with its neck broken and wedged between two twigs of a barberry bush — clearly the work of a Shrike. Mr. Brewster, who now has the bird's skin, was sure that it could not have been dead over two weeks. In the stomach were many land snail shells" (Auk, Vol. VII, 1890, p. 409). And there was an occurrence of a Palm Warbler (*Dendroica palmarum palmarum*) remaining in the Arnold Arboretum at Jamaica Plain from November 26, 1911, to January 3, 1912, seen by myself and other observers (Auk, Vol. XXIX, April, 1912, p. 247). And 'Bird-Lore' gives the record of a Blue-winged Warbler (*Vermivora pinus*) found dead in the Bronx Park, New York, January 6, 1900, by Mrs. Elizabeth G. Britton, which "evidently starved to death." Mr. Chapman in a note on this occurrence states that the bird was presented to the American Museum; that it is apparently a female and its plumage is in fresh

and unworn condition; that the Blue-wing is not only one of the first of our summer residents to leave, it being rarely observed after September 5, but that it winters south of the United States; that on one occasion the mercury had registered 8°; and that probably the well-known habit of the species of searching for food in bunches of dead leaves and similar situations had enabled it to live where a flycatching warbler would long before have died" (vol. II, p. 26). As the winter range of these three species according to Chapman (*Warblers of North America*) is southern Texas to southern Mexico for *V. rubricapilla*, Florida southward to the West Indies for *D. palmarum*, and northern Mexico to Colombia for *V. pinus*, the occurrences would seem to have been purely accidental, while the fact that the usual winter range of the Orange-crowned Warbler reaches as far north as Charleston, South Carolina, where temperatures as low as 8° occur without being fatal to it, makes it appear quite possible and not improbable that the Orange-crown may have the hardiness to be a winter resident as far north as Boston, since records of winter visitants have now been obtained in five of the last eleven years, four of these years being 1909, 1910, 1912, and 1915, three individuals in 1915.

The Orange-crowned Warbler is much rarer in the spring migration in New England. As the general route of the species northward is through the Mississippi valley, the individuals which follow more closely the coast line, passing east of the Alleghanies, are few in number. The records of birds thus reaching New England, so far as they have been obtained, number but five, one each in the years 1863, 1876, 1888, 1891, 1892, on May 15, 16, 8, 9, 17 respectively. And I find but two Eastern New York and New Jersey occurrences for May, namely, a Highland Falls, N. Y., record in 1875 (Bull. N. O. C., 1878, p. 46), and a Hoboken, N. J., record for 1865 (Auk, Vol. X, Jan., 1893, p. 90). Montreal has one record, that of a bird shot on May 21, 1890, by Mr. Ernest D. Wintle (Auk, Vol. VIII, July, 1890, p. 290). Therefore, the species is a very rare transient visitant in the spring in the whole northeastern section of the United States, so far as published records show. It is, however, a spring migrant in western New York, where, Mr. Eaton testifies, "it is a regular migrant, though in small numbers, in the spring, arriving from the 12th to the 17th

of May, and disappears from the 18th to the 21st." Thence westward it is less uncommon. "There are no breeding records for Canada in Ontario or eastward," Mr. Chapman states in 'Warblers of North America,' p. 87.

In its fall migration the Orange-crowned Warbler as a species seeking the coast line also shows a marked preference for the shores of ponds and vicinity of brooks, the records indicate, also for low shrubbery. It is readily distinguished from the Kinglets, both Golden-crowned and Ruby-crowned, by its having no wing-bars, and from the former by not showing its orange crown and having no definite head markings, by its yellowish underparts, dull in color, but distinctly yellow, and by its larger size. I have found the eye-ring and superciliary line to be very obscure, while the Ruby-crown's eye-ring is conspicuous. The call-note is also distinctive. It most nearly resembles the Nashville Warbler in plumage, but it is differentiated from that species by its dusky greenish yellow underparts which are obscurely streaked. And as the Nashville Warbler would be an extraordinary occurrence in late November, in December, and in January in New England, the very late migrating warblers which reach the Boston Region, other than Myrtle Warblers, may be expected to prove to be Orange-crowns, and not Nashvilles, and if they conform to color tests may fairly be so regarded without examination in the hand.

As to the crown of this species in life, Mr. Wayne in his letter recently received states "The orange patch is, of course, basal and is *always* concealed by the tips of the feathers. I can only tell an adult at large by the color of the underparts, as the crown spot is never discernible while the bird is at large — hence the specific name *celata*. In breeding plumage, that is, summer, the tips of the feathers are worn away by abrasion, and the crown is not at that season absolutely concealed. In winter and early spring the crown patch is only visible upon examination. I have yet to see the bird display its crown patch, even when chasing the female in March and April, and I am pretty sure I have seen over 500 specimens in South Carolina since 1886, not to mention the number I have encountered in various portions of Florida. The Orange-crowned Warbler *never* displays its crown patch while here in winter or early spring, like the Ruby and Golden-crowned Kinglets."

Of his specimens Mr. Wayne says "The orange patch is present in *both* sexes, but is more intense and pronounced in the males. I have some superb old males with the entire crown deep orange; the forehead is the only part which lacks this color." Mr. Brewster also states that he has never seen the concealed crown patch shown by a living bird, "although conspicuous enough," he writes, "in cabinet specimens of males taken in spring, when the plumage of the crown is but slightly disarranged. All such specimens have it in profusion; nor is it always wanting in spring females, although none of mine have more than a comparatively slight suffusion of it, and most lack it altogether. With males taken in autumn (September to November) and winter (December to February) it is almost or quite as profuse and richly colored as in spring ones, in what I take to be fully adult males, but much more dull and restricted in amount with those presumably immature, and with some of these nearly or quite absent altogether." Mr. Brewster regards this concealed color of the crown as "not orange at all" and says that to his eye "it has a more or less decided tinge of dull or pale chestnut." Mr. Brewster has very kindly undertaken for me a careful examination of a large series of skins which he possesses, which includes many specimens collected by Mr. Wayne near Charleston, S. C., in December, January, and February.

The records of the Orange-crowned Warbler for the fall and winter of 1915-1916, surpassing former seasons in their number, together with those of other recent years, strengthen the view that the species may be becoming a more regular and less rare fall migrant in this region and that it is manifesting a disposition to be a winter visitant, if not, indeed, a winter resident.